

General

Title

Acute respiratory failure: percentage of patients diagnosed with exacerbation of COPD treated with early non-invasive mechanical ventilation (MV).

Source(s)

Quality indicators in critically ill patients. Madrid (Spain): Spanish Society of Intensive and Critical Care and Units Coronary (SEMICYUC); 2011. 185 p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of patients diagnosed with exacerbation of chronic obstructive pulmonary disease (COPD) treated with early non-invasive mechanical ventilation.

Rationale

The aim of intensive care medicine is to provide critical patients with the healthcare that they need, ensuring the quality and safety of care. Intensive care medicine is one of the principal components of modern healthcare systems. There is an increasing demand for this resource, which involves high costs.

The quality of care has gradually come to be the central focus of healthcare, and in recent years patient safety has come to represent one of the key aspects of quality. In the case of intensive care medicine, this interest in quality is even more evident, not only because of its social and economic impact, but also because some of the dimensions involved in the quality of care of critical patients take on greater importance: critical patients are more vulnerable, access to critical care is more limited so efforts to

distribute resources equitably are more important, scant scientific evidence is available, and the efficiency is limited.

The use of non-invasive mechanical ventilation (MV) on exacerbation of chronic obstructive pulmonary disease (COPD) reduces mortality, hospital stay, and the need for orotracheal intubation; moreover, it increases the success of treatment.

Evidence for Rationale

Fernandez-Vivas M, Gonzalez-Diaz G, Caturla-Such J, Delgado-Vilchez FJ, Serrano-Simon JM, Carrillo-Alcaraz A, Vaya-Moscardo J, Galcera-Tomas J, Jaime-Sanchez FA, Solera-Suarez M. [Use of non-invasive ventilation in acute respiratory failure. Multicenter study in intensive care units]. Med Intensiva. 2009 May;33(4):153-60. [PubMed](#)

Gorini M, Ginanni R, Villella G, Tozzi D, Augustynen A, Corrado A. Non-invasive negative and positive pressure ventilation in the treatment of acute on chronic respiratory failure. Intensive Care Med. 2004 May;30(5):875-81. [PubMed](#)

Quality indicators in critically ill patients. Madrid (Spain): Spanish Society of Intensive and Critical Care and Units Coronary (SEMICYUC); 2011. 185 p.

Ram FS, Wellington S, Rowe B, Wedzicha JA. Non-invasive positive pressure ventilation for treatment of respiratory failure due to severe acute exacerbations of asthma. Cochrane Database Syst Rev. 2005; (3):CD004360. [32 references] [PubMed](#)

Ram FSF, Picot J, Lightowler J, Wedzicha JA. Non-invasive positive pressure ventilation for treatment of respiratory failure due to exacerbations of chronic obstructive pulmonary disease. In: The Cochrane Database of Systematic Reviews [internet]. Issue 3. Hoboken (NJ): John Wiley & Sons, Ltd.; 2004 [updated 2004 Mar 31]. [Art. No. CD004104]. [PubMed](#)

Primary Health Components

Acute respiratory failure; chronic obstructive pulmonary disease (COPD); non-invasive mechanical ventilation (MV)

Denominator Description

Number of patients diagnosed with exacerbation of chronic obstructive pulmonary disease (COPD) discharged from the intensive care unit (ICU) (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Number of patients diagnosed with exacerbation of chronic obstructive pulmonary disease (COPD) treated with early non-invasive mechanical ventilation (MV) (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

A systematic review of the clinical research literature (e.g., Cochrane Review)

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Hospital Inpatient

Intensive Care Units

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

Age greater than or equal to 18 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

Unspecified

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Institutionalization

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Number of patients diagnosed with exacerbation of chronic obstructive pulmonary disease (COPD) discharged from the intensive care unit (ICU)

Population: All patients diagnosed with exacerbation of COPD who are discharged from the ICU during the period reviewed.

Exclusions

Contraindications for non-invasive mechanical ventilation (MV), including:

- Coma [Glasgow Coma Scale (GCS) less than or equal to 8]

- Intolerance to the technique

- Facial lesions that contraindicate the use of the mask

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Number of patients diagnosed with exacerbation of chronic obstructive pulmonary disease (COPD) treated with early non-invasive mechanical ventilation (MV)

Early non-invasive MV: Initiated within 2 hours of admission.

Exclusions

Unspecified

Numerator Search Strategy

Institutionalization

Data Source

Electronic health/medical record

Paper medical record

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Prescriptive Standard

Standard: 95%

Evidence for Prescriptive Standard

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Identifying Information

Original Title

Early implementation of noninvasive mechanical ventilation on exacerbation of chronic obstructive pulmonary disease (COPD).

Measure Collection Name

Quality Indicators in Critically Ill Patients

Measure Set Name

Acute Respiratory Failure

Submitter

Spanish Society of Intensive and Critical Care and Units Coronary - Clinical Specialty Collaboration

Developer

Spanish Society of Intensive and Critical Care and Units Coronary - Clinical Specialty Collaboration

Funding Source(s)

Boehringer Laboratories

Composition of the Group that Developed the Measure

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Financial Disclosures/Other Potential Conflicts of Interest

Unspecified

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2011 Mar

Measure Maintenance

Unspecified

Date of Next Anticipated Revision

2016 Jul

Measure Status

This is the current release of the measure.

The measure developer reaffirmed the currency of this measure in May 2016.

Measure Availability

Source available in [English](#) and [Spanish](#) from the Spanish Society of Intensive and Critical Care and Units Coronary (SEMICYUC) Web site.

For more information, contact SEMICYUC at Paseo de la Reina Cristina, 36, 4^o D, Madrid, Spain; Phone: +34-91-502-12-13; Fax: +34-91-502-12-14; Web site: www.semicyuc.org ; E-mail: secretaria@semicyuc.org.

NQMC Status

This NQMC summary was completed by ECRI Institute on December 10, 2013. The information was verified by the measure developer on February 6, 2014.

The information was reaffirmed by the measure developer on May 10, 2016.

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Production

Source(s)

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